

REMARKS

A Request for Continued Examination (RCE) is being filed concurrently herewith. Accordingly, it is respectfully requested that this Reply to Final Office Action be entered and favorably considered. Furthermore, the amendment to the claims is submitted herewith in a form in accordance with the rule changes promulgated by the Patent and Trademark Office in July, 2003. It is respectfully urged that no new matter has been added to the claims by the amendment of the claims herein.

The Examiner's withdrawal of the previous final Office Action dated November 26, 2003, and the issuance of a new final Office Action dated April 7, 2004 are acknowledged and gratefully appreciated. Also, the courtesy and patience which Examiner Wai Sing Louie has extended to the undersigned attorney in allowing further telephone interviews to discuss the invention defined by the claims and the references cited by the Examiner are also acknowledged and gratefully appreciated.

In this final Office Action, the Examiner has withdrawn the Glenn et al. patent (U.S. Patent No. 6,228,676) as a reference and relies solely on the Ohno et al. patent (U.S. Patent No. 5,227,662), in combination with the Ishinaga patent (U.S. Patent No. 5,936,264) in his rejection of claims 1-4. The Examiner, in this last final Office Action, contends that the Ohno et al. patent discloses an inner portion and an outer portion of an electrode 10 residing in the same plane, and refers to Figure 7 of the Ohno et al. patent as showing this, and furthermore that the Ohno et al. patent has its lead wire 28 made of a metal and is a step higher than the inner electrode 12, again referring to Figure 7 of the Ohno et al. patent.

In previous responses, and in the various telephone interviews which Examiner Louie courteously granted to the undersigned attorney, it was explained by the undersigned attorney that Figure 7 of the Ohno et al. patent, which is a cross-sectional view of the semiconductor device disclosed therein, does not show what the structure of lead 28 is, and that one has to

view Figure 7 in light of Figure 1A - Figure 1E and Figure 3A - Figure 3D. The undersigned attorney directed Examiner Louie to those figures and explained to him that reference number 28 is a wire lead and not a step. Furthermore, the undersigned attorney pointed out that lead wire 28 runs parallel to the electrode, not transversely to it, and, therefore, cannot possibly function as a step to block the flow of solder.

The undersigned attorney further explained to Examiner Louie that nowhere in the Ohno et al. patent is a “step” defined, and it is not possible for lead wire 28 to be a step, because it is just a wire. Furthermore, the undersigned attorney explained to Examiner Louie that the Ohno et al. patent mentions nowhere in the specification that lead wire 28 blocks solder from flowing and, therefore, this is further evidence that it does not function as a step nor was it intended to function as a step.

To further differentiate the claimed invention from those disclosed in the Ishinaga patent and the Ohno et al. patent, the main claim, claim 1, has now been amended to further define the step as “extending transversely and entirely across the at least one of said pair of electrodes”. This amendment to main claim 1 is submitted for Examiner Louie’s consideration and to overcome his concerns with respect to the structure of the Ohno et al. patent. This structure is clearly shown in Figures 1A-1C, 2D and 3 of the drawings.

Clearly, the lead wire 28 in the Ohno et al. patent, which Examiner Louie is equating to the step formed in the inner portion of the electrode of Applicant’s claimed invention, runs parallel to the electrode, not transversely to it. Main claim 1 has now been amended to structurally define the step as extending transversely and entirely across the electrode. The only other reference of record currently applied against the claims, the Ishinaga patent, also clearly does not disclose this structure, nor does any of the other references cited by the Examiner previously and which have been withdrawn disclose this feature. Accordingly, it is respectfully urged that now amended main claim 1 patentably distinguishes over the Ohno et

al. and Ishinaga patents, and any of the other references cited by the Examiner, and is allowable.

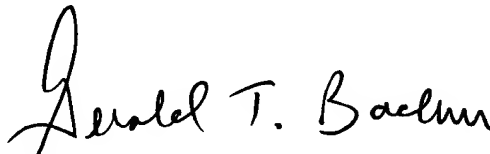
Claims 5-8 have been added as dependent claims for the Examiner's consideration. The limitation of "by only a metal layer" was moved from claim 1 to new dependent claims 5-8. Because of their dependency upon claim 1, it is respectfully urged that new claims 5-8 patentably distinguish over the references cited by the examiner for the same reasons submitted with respect to claim 1, as amended.

However, additionally, it is respectfully urged that claims 5-8, with its limitation of "by only a metal layer", in defining the step, patentably distinguishes over the references of record, in particular the Ohno et al. patent and the Ishinaga patent, because these two references do not disclose this feature. The Ishinaga patent shows no step whatsoever. The composite lead frame and semiconductor device of the Ohno et al. patent also does not include a step formed "by only a metal layer" in the inner portion of the electrode. In Applicant's semiconductor device, step 18 does not rest on, nor is it formed from, any plastic film. It is formed only by a metal layer. The heat of the melting solder thus will not deform the step 18. The lead wire 28 in the Ohno et al. patent is positioned over plastic film 22'. Thus, film portion 22' could not function as a portion of the inner portion of the electrode as it would melt and deform, unlike the step defined by claims 5-8 of the subject application, where the step is specifically defined as being formed by only a metal layer and, by its dependency on claim 1, by being formed in the inner portion of the electrode. Accordingly, it is respectfully urged that claims 5-8 patentably distinguish over the references of record and are also allowable.

In view of the foregoing amendments and remarks, and in view of the filing of the RCE concurrently herewith, it is respectfully requested that the amendment to claim 1 and new claims 5-8 be entered and favorably considered and that the application be allowed with

claims 1-8, as amended. If Examiner Louie has any questions or comments, or further suggestions which will help advance this case to allowance, it is respectfully requested that he contact the undersigned attorney at the telephone number given below.

Respectfully submitted,

A handwritten signature in cursive script that reads "Gerald T. Bodner". The signature is written in dark ink and is positioned above a horizontal line.

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